

AMENDMENTS TO THE CLAIMS

1 1. (Currently Amended) A user interface for displaying database classifiers
2 organized with multiple hierarchy levels, the user interface comprising:
3 a root node navigation bar representing a root hierarchy level of the multiple hierarchy
4 levels; and
5 multiple sub-node navigation bars ~~stacked below~~ oriented from the root node navigation
6 bar, each sub-node navigation bar representing a sub-node from a selected level of the multiple
7 hierarchy levels, wherein multiple sub-nodes represent database classifiers of database objects
8 and a plurality of sub-nodes in the multiple hierarchy levels represent the same database
9 classifier ~~representing the same database object~~ label having associated indexed, homogenous
10 attributes of parts and each indexed, homogenous attribute represents a heterogeneous section of
11 the parts sliced across the attributes of the parts;
12 wherein the sub-node navigation bars display sub-nodes on a path from the root hierarchy
13 level to the one or more sub-nodes having the lowest selected hierarchy level, wherein the user
14 interface hides siblings of the displayed sub-nodes for the hierarchy levels between the root level
15 and the hierarchy level of the one or more sub-nodes having the lowest selected hierarchy level,
16 and each displayed sub-node represents a distinct classifier in the path.

1 2. (Original) The user interface of Claim 1 further comprising:
2 information associated with a sub-node, the sub-node having the lowest selected
3 hierarchy level.

1 3. (Original) The user interface of Claim 2 wherein the hierarchy levels
2 represent non-homogeneous classifiers of the information and wherein the information
3 associated with the sub-node having the lowest selected hierarchy level has one or more
4 homogeneous attributes, the user interface further comprising one or more tabs associated with
5 the one or more attributes of the information, each tab operable to select display of information
6 having an attribute associated with the tab.

1 4. (Original) The user interface of Claim 1 wherein one or more of the
2 navigation bars is operable to select display of labels for nodes from the root node to sub-nodes

3 having a hierarchy level one level lower than the node associated with the selected navigation
4 bar.

1 5. (Original) The user interface of Claim 1 implemented with one of Win32,
2 JavaSwing or DHTML.

1 6. (Original) The user interface of Claim 1 presented through a browser.

1 7. (Original) The user interface of Claim 6 wherein the browser is populated
2 using XML data islands.

1 8. (Original) The user interface of Claim 1 further comprising an activation icon
2 associated with a navigation bar, the activation icon operable to display the hierarchy level
3 associated with the sub-node of the navigation bar.

1 9. (Original) The system of Claim 8 wherein the activation icon is further
2 operable to display sub-nodes of the activated icon.

1 10. (Previously Presented) The system of Claim 8 wherein the activation icon
2 is further operable to hide sibling nodes of the activated icon.

1 11. (Currently Amended) A method for presenting database classifiers organized by
2 hierarchy levels, the method comprising:

3 displaying a first hierarchy level having a first hierarchy database classifier label;

4 displaying a second hierarchy level having multiple second hierarchy database classifier
5 labels;

6 activating one of the second hierarchy database classifier labels;

7 displaying information associated with the activated database classifier label or, if
8 available, a third hierarchy level having multiple third hierarchy database classifier labels; and

9 hiding display of the unactivated second hierarchy database classifier labels;

10 wherein multiple database classifier labels represent database objects and a plurality of

11 database classifier labels in multiple hierarchy branches are the same database classifier label

12 ~~representing the same database object~~ having associated indexed, homogenous attributes of parts

13 and each indexed, homogenous attribute represents a heterogeneous section of the parts sliced

14 across the attributes of the parts and each displayed classifier label is displayed only once in each
15 displayed hierarchy.

1 12. (Original) The method of Claim 11 wherein activation of the second
2 hierarchy label displays information associated with the activated label, the information indexed
3 according to one or more attributes, the method further comprising:
4 displaying multiple index tabs proximate to the information, each index tab associated
5 with one or more of the attributes;
6 activating one of the multiple index tabs; and
7 displaying the information associated with the one or more attributes of the activated
8 index tab.

1 13. (Original) The method of Claim 12 wherein one or more of the displayed
2 hierarchy levels are stacked as navigation bars in order from a root level to a lowest hierarchy
3 level.

1 14. (Original) The method of Claim 13 wherein the displayed information is
2 stacked below the lowest hierarchy level.

1 15. (Original) The method of Claim 11 wherein activation of the second
2 hierarchy label displays the third hierarchy level having multiple third hierarchy labels, the
3 method further comprising:
4 displaying an activation icon associated with the first hierarchy label, the activation icon
5 operable to remove the multiple third hierarchy labels and to display the multiple second
6 hierarchy labels.

1 16. (Original) The method of Claim 12 further comprising:
2 displaying an activation icon;
3 activating the activation icon;
4 removing the multiple third hierarchy labels; and
5 displaying the multiple second hierarchy labels.

1 17. (Original) The method of Claim 11 wherein the hierarchy levels are displayed
2 as a stacked box metaphor.

1 18. (Currently Amended) A computer system comprising:
2 a database having information classified by non-homogeneous classifiers organized as a
3 root node and multiple sub-nodes;
4 a display operable to present a user interface;
5 a control interfaced with the database and the display, the control operable to generate a
6 user interface for presentation on the display, the user interface having the root node and
7 predetermined sub-nodes stacked from highest to lowest hierarchy levels, the user interface
8 further operable to hide predetermined sub-nodes that are not relevant to the sub-node having the
9 lowest hierarchy level, wherein multiple sub-nodes represent database classifiers of database
10 objects, and a plurality of sub-nodes in the multiple hierarchy levels are the same database
11 classifier ~~representing the same database object~~ label having associated indexed, homogenous
12 attributes of parts and each indexed, homogenous attribute represents a heterogeneous section of
13 the parts sliced across the attributes of the parts, and each displayed sub-node represents a
14 distinct classifier.

1 19. (Original) The computer system of Claim 18, the user interface further having
2 predetermined information stacked below the sub-node having the lowest hierarchy level, the
3 predetermined information associated with the sub-node having the lowest hierarchy level.

1 20. (Original) The computer system of Claim 19 wherein the information is
2 further indexed by an attribute, the user interface further having multiple index tabs associated
3 with the information and operable to display information having the attribute.

1 21. (Original) The computer system of Claim 20, the user interface further having
2 a scroll bar associated with the information and operable to scroll through the information
3 without affecting the presentation of the stacked nodes.

1 22. (Currently Amended) A program product for displaying hierarchy levels of
2 database classifiers that organize the database classifiers with multiple nodes, the program
3 product comprising:
4 a storage medium that stores computer readable instructions; and

5 instructions stored on the storage medium, the instructions operable to command a
6 computer to display selected nodes from first, second or third hierarchy levels, the instructions
7 selecting for display the nodes of the first and second hierarchy levels display only the nodes of
8 the first and second hierarchy levels on a traversed path to the third hierarchy level, wherein
9 multiple nodes represent database classifiers of database objects, a plurality of nodes in the
10 hierarchy levels represent the same database classifier ~~representing the same database object~~
11 label having associated indexed, homogenous attributes of parts and each indexed, homogenous
12 attribute represents a heterogeneous section of the parts sliced across the attributes of the parts,
13 and each displayed node represents a distinct classifier.

1 23. (Original) The program product of Claim 22 wherein the first hierarchy level
2 comprises the root node.

1 24. (Original) The program product of Claim 22 wherein the second hierarchy
2 level comprises multiple nodes, the instructions commanding the computer to display the one of
3 the multiple nodes of the second hierarchy level on the traversed path to the third hierarchy level
4 and to hide the sibling nodes of the displayed node.

1 25. (Original) The program product of Claim 22 wherein the third hierarchy level
2 comprises information associated with a selected one of the nodes of the second hierarchy level.

1 26. (Original) The program product of Claim 25 further comprising multiple
2 indices that organize the information of the third hierarchy level according to one or more
3 attributes.

1 27. (Original) The program product of Claim 22 wherein the third hierarchy level
2 comprises multiple nodes, the instructions further operable to accept a selection of one of the
3 multiple nodes of the third hierarchy level and to hide the sibling nodes of the selected third
4 hierarchy level node.

1 28. (Currently Amended) An electronic display of database classifiers organized with
2 multiple hierarchy levels, the electronic display comprising:
3 a visual representation of a tree data structure having a root node and multiple descendant
4 nodes; and

5 a visual representation of an index of data associated with a selected descendant node;
6 wherein the visual representation of the tree data structure displays the descendant nodes
7 on the traversed path from the root node to the selected descendant node and conceals siblings of
8 the descendant nodes on the traversed path; and

9 wherein multiple descendant nodes represent database classifiers of database objects, a
10 plurality of descendant nodes in the multiple hierarchy levels represent the same database
11 classifier ~~representing the same database object~~ label having associated indexed, homogenous
12 attributes of parts and each indexed, homogenous attribute represents a heterogeneous section of
13 the parts sliced across the attributes of the parts, and each displayed node represents a distinct
14 classifier.

1 29. (Canceled)

1 30. (Previously Presented) The electronic display of Claim 28 wherein the
2 descendant nodes on the traversed path are selectable to display child nodes of the selected node.

1 31. (Previously Presented) The electronic display of Claim 28 wherein the
2 descendant nodes on the traversed path are selectable to display sibling nodes of the selected
3 node.

1 32. (Original) The electronic display of Claim 28 wherein the index comprises a
2 visual representation of data.

1 33. (Original) The electronic display of Claim 32 wherein the data nodes
2 represent non-homogeneous classifiers and the index represents a homogeneous attribute.

1 34. (Original) The electronic display of Claim 32 wherein the data is organized
2 according to one or more attributes.

1 35. (Original) The electronic display of Claim 34 wherein the data is represented
2 by tabs associated with the one or more attributes.

1 36. (Original) The electronic display of Claim 35 wherein selection of a tab
2 displays data associated with the tab and conceals other data associated with the selected
3 descendant node.

1 37. (Original) The electronic display of Claim 28 wherein the root node and
2 descendent nodes are stacked in hierarchy level order.

1 38. (Currently Amended) A combination tree data structure and index capable of
2 electronic visual display of database classifiers organized by hierarchy levels, the combination
3 tree data structure and index comprising:

4 a tree data structure having one or more nodes associated with each hierarchy level; and
5 an index of selected information associated with a selected one of the nodes, the index
6 having a plurality of indices, each of the plurality of indices capable of displaying predetermined
7 parts of the selected information,

8 wherein the siblings of the selected node and the siblings of ancestors of the elected node
9 are not displayed; and

10 wherein multiple sibling nodes represent database classifiers of database objects, a
11 plurality of sibling nodes in the hierarchy levels represent the same database classifier
12 ~~representing the same database object~~ label having associated indexed, homogenous attributes of
13 parts and each indexed, homogenous attribute represents a heterogeneous section of the parts
14 sliced across the attributes of the parts, and the selected node, the ancestors of the selected node ,
15 and any children of the selected node represent distinct classifiers.

1 39. (Canceled)

1 40. (Original) The combination tree data structure and index of Claim 38 wherein
2 each indice is represented by a tab.

1 41. (Original) The combination tree data structure and index of Claim 38 wherein
2 the hierarchy levels correspond to non-homogeneous classifiers of the information.

1 42. (Original) The combination tree data structure and index of Claim 38 wherein
2 the indices correspond to one or more homogeneous attributes of the information.

1 43. (Currently Amended) A method of electronically displaying database classifiers
2 organized by hierarchy levels, the method comprising:

3 displaying a tree structure having a plurality of nodes representing database classifiers;

4 selecting a node;
5 displaying the tree structure with only the selected node and the direct ancestors of the
6 selected node, wherein the displayed tree structure represents distinct database classifiers; and
7 displaying an index associated with the selected node, the index having a plurality of
8 indices, each of the plurality of indices having associated information representing a database
9 object;
10 wherein multiple sibling nodes represent database classifiers of database objects, a
11 plurality of sibling nodes in the hierarchy levels represent the same database classifier
12 ~~representing the same database object~~ label having associated indexed, homogenous attributes of
13 parts and each indexed, homogenous attribute represents a heterogeneous section of the parts
14 sliced across the attributes of the parts.

1 44. (Original) The method of Claim 43 further comprising:
2 displaying the tree structure with only the selected node and the direct ancestors of the
3 selected node.

1 45. (Original) The method of Claim 44 wherein the tree structure is displayed as
2 a stacked box metaphor.

1 46. (Original) The method of Claim 45 further comprising:
2 collapsing a node of the stacked box metaphor; and
3 displaying the tree structure with the collapsed node, the children of the collapsed node
4 and the direct ancestors of the collapsed node.

1 47. (Original) The method of Claim 43 wherein the nodes represent non-
2 homogeneous classifiers and the index represents homogeneous attributes.